November 1980 A.E. Res. 80-28

THE POTENTIAL FOR GROWTH OF CONSUMER COOPERATIVES

A Comparative Analysis

Bruce F. Hall and Lana L. Hall

Department of Agricultural Economics
Cornell University Agricultural Experiment Station
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853

THE POTENTIAL FOR GROWTH OF CONSUMER COOPERATIVES - A COMPARATIVE ANALYSIS

BY

Bruce F. Hall and Lana L. Hall*

November 1980

* Bruce Hall is Assistant Professor in the Department of Consumer Economics at Cornell University; Lana Hall is Assistant Professor in the Department of Agricultural Economics at Cornell University.

Senior authorship is not assigned.

The authors are grateful to Karen Bunch and Ingrid Foik for research assistance.

HEADNOTE

Over the past decade, widespread interest has developed among consumers in the formation of cooperatives, raising the question of how economically viable these cooperatives will be over time. This analysis shows that the potential for growth of consumer cooperatives will depend on the success of cooperatives in adopting certain structural changes, including a capital stock form of organization, increasing management efficiency, the use of borrowed capital, federation and consolidation. These conclusions are derived from analysis of the cost functions of the cooperative firm, and from comparative analysis of the structural evolution of producer marketing cooperatives and consumer cooperatives.

THE POTENTIAL FOR GROWTH OF CONSUMER COOPERATIVES - A COMPARATIVE ANALYSIS

The cooperative movement, which has experienced in the past century turbulent cycles of growth and decline, has inspired equally cyclical, yet intense interest on the part of social critics and researchers from a variety of disciplines. The flexibility and fluidity of the cooperative form of organization has limited the ability of social scientists, particularly economists, to focus rigorous analytical tools on the cooperative experience: exceptions are well established institutional structures such as the Yugoslavian firm [25] and the agricultural marketing cooperatives of the U.S. [15]. However, the resurgence of consumer cooperatives in the 1970's and academic interest in them [1] has created a need for economic analysis of the consumer cooperative. This paper outlines the characteristics of and the structural problems faced by the newly emerging consumer cooperatives in the U.S. Potential for growth in the face of these structural problems is analyzed using tools of economic analysis and comparison with producer cooperatives, in terms of motivation for structural change and consequences of such change for growth.

Current statistics on the newly emerging consumer food cooperatives show that about 3.5 million individuals belong to cooperative buying clubs and storefronts in the U.S., with projected annual sales for these cooperatives of approximately $400 million. Although there is considerable variety in the types of activities consumer cooperatives have undertaken, the major thrust of the movement has been toward food cooperatives, upon which the following discussion will focus.

In addition to the consumer cooperatives which have been formed over the past decade, there are about a dozen older cooperatives which have survived from an earlier period of consumer cooperative formation in the 1920's and 1930's. Since growth of these older cooperatives has been static for some time, this discussion will concentrate on the newly emerging cooperatives.[1] Initially highly variable in structure, viability and objectives, these new cooperatives are showing signs of stabilizing as a movement, although the failure rate of individual organizations remains very high. While not yet mature as an institution, certain characteristic types of organizations and methods of operation now dominate the newly emerging cooperatives.

I. Characteristics of Newly Emerging Cooperatives

To analyze the structure of the newly emerging consumer cooperatives, it is necessary to provide some background and identify the characteristics that distinguish them from older cooperatives. Though both new and old cooperatives adhere generally to the principles of cooperation established by the Rochdale Pioneers early in the 19th century, the new cooperatives interpret those principles loosely; in some cases they deviate substantially. Perhaps the most significant distinction is with respect to the principle that sales of consumer goods should be at market prices, with dividends paid in proportion to purchases. Most post-1965 cooperatives have chosen to sell below market price and provide direct savings to their members, with surcharges added to wholesale cost of the product to provide for operating costs of the cooperatives. Thus one of the principles which seems to have emerged is that the cooperatives should not only be non-profit in an accounting sense over the long run, but should also avoid generating an operating surplus from sales in the short run. Funds for expansion and capital improvement must come from grants, loans, contributions, or increases in the surcharge agreed upon by members for specific purposes.

It is significant to note that most of the older traditional cooperatives are survivors of a movement that began in the 1920's and 1930's, a period of generally stable or falling prices. The new cooperatives, by contrast, were formed in the period since 1969, when prices were rising. This may be a partial explanation of their choice of the direct savings rather than rebate method of operations. The rebate cooperative holds surpluses generated by its operations for as long as a year before returning the surplus to members via patronage refunds. This was seen as a major virtue of the cooperative by the Rochdale Pioneers, for whom the cooperative was a vehicle for helping its low-income members accumulate savings.

In times of rapid inflation, however, a cooperative which operates as a net debtor to its members has little attraction. To the extent that the cooperative uses that surplus to internally finance capital improvements, the cooperative itself is also hurt by inflation--the probability that the buying power of the surplus will be eaten up by inflation before it can be used to finance long run cost decreasing improvements is also increased. The direct savings cooperative, by contrast, tries to maintain a balanced account with its membership at all times, and the members can derive immediate benefits via the direct savings. They do not become net creditors to the cooperative, and therefore, do not incur additional costs as a result of inflation. A further advantage of the direct savings model is that the savings do not constitute income and, therefore, are not taxed; with the rebate cooperative the dividends would be taxable.

This characteristic of direct savings has a corollary in the formal organization of the newly emerging cooperatives that distinguishes them from older cooperatives. Most older cooperatives are incorporated as stock cooperatives, where the members invest money and shares are issued to them. Most newly emerging cooperatives, if they are incorporated at all, are organized as membership cooperatives. Persons or households wishing to participate pay a membership fee annually or upon joining, and no stock is issued [7].

A third distinguishing characteristic from the older cooperatives is the reluctance of newly emerging cooperatives to rely heavily on paid staff and management. As they expand it often becomes necessary to hire staff, but as a matter of principle, these organizations generally prefer to use volunteer membership labor if possible. Where volunteer labor is insufficient, they often have chosen to employ a staff composed of a paid "collective" of the membership. The collective makes decisions and performs the basic operations of the cooperative with assistance from volunteers.

The tax system creates additional incentives to organize cooperatives that rely on volunteer labor rather than paid staff. By utilizing volunteers, the cooperative remains outside the tax system as part of the informal or "barter" economy. The employer pays no payroll taxes, and the employee pays no income tax. The benefits of participation in the cooperative can make volunteer labor in exchange for savings on food budgets an attractive moonlighting occupation, when compared to alternative after tax income opportunities. Even where paid staff is employed, some cooperatives attempt to retain these tax benefits by employing them as "consultants", or some similar ploy, to evade payroll taxes. Since many cooperatives are incorporated as non-profit organizations, they may enjoy tax advantages in any case.

The characteristics of reliance on volunteer labor, membership capital and direct savings to members contribute to the fundamental problem facing the cooperative in the long run--the inability of small cooperatives to grow. The way in which these characteristics limit the newly emerged cooperative's growth is illustrated below with analysis of the cooperative as a firm.

With few exceptions, the newer cooperatives are too small to realize the economies of scale of a large supermarket. While the cohesion of cooperative membership requires contact and communication, the economics of the retail food industry in which the food cooperative operates requires control of large organizations, with centralized decision-making, to avoid being squeezed by almost equally powerful wholesaler groups and food manufacturers. The survival of the consumer cooperative is threatened until it grows enough to gain a competitive position in the food marketing system. It may, of course, be the case that many small cooperatives prefer to remain small in order to preserve the positive social benefits of group interaction. This paper is addressed primarily to that segment of the consumer cooperative movement that is seeking to grow in order to become more economically viable.

As a firm, the cooperative buys and markets consumer goods, incurring costs and generating revenues. Its objective is to equate output price to average costs of production. Anderson, Foster and Maurice [1] have shown that if membership size is a decision variable, the cooperative will operate at the point where demand is forced through the point of minimum average cost. In reality, not only membership but the structural form of the cooperative becomes a decision variable, as the cooperative must determine how much physical plant to acquire and whether or not to rely exclusively on volunteer labor. The cost function of the cooperative is determined by these decisions, and analysis of the cost functions of cooperative firms illustrates why small cooperatives and buying clubs experience difficulty in expanding to realize economies of scale.

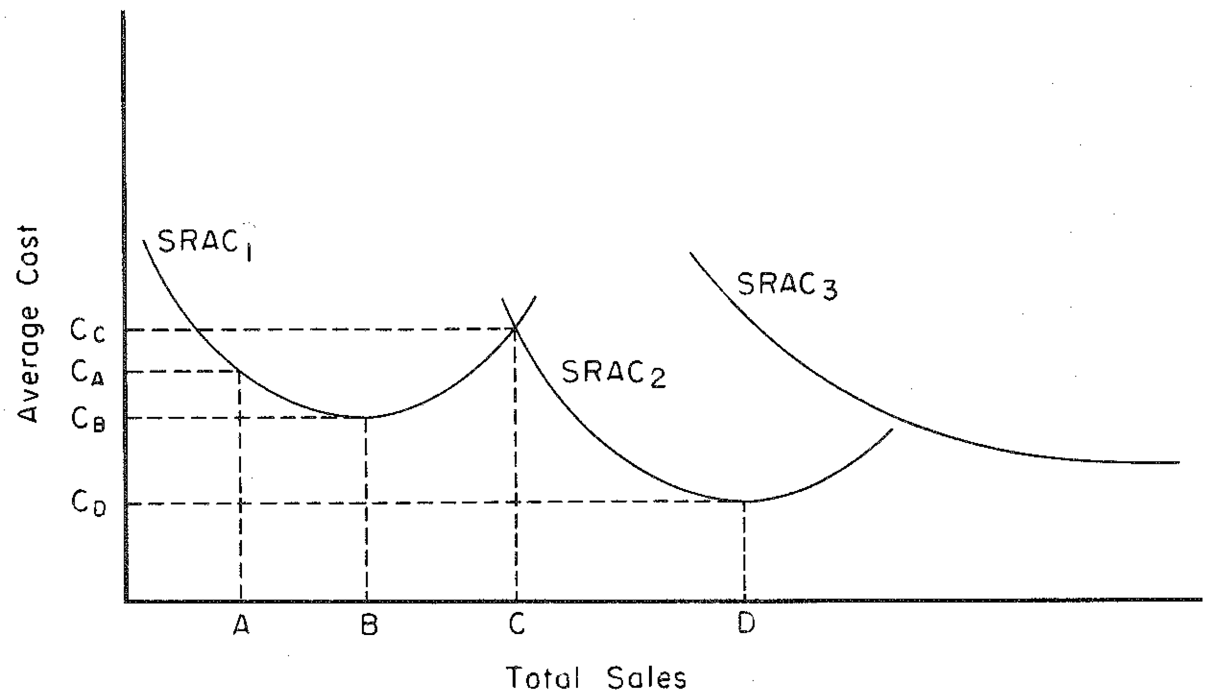
Figure 1 shows how the average costs of the individual cooperative firm vary, as a function of total sales. The short run average cost curves of a participatory cooperative which uses volunteer labor are drawn as $SRAC_1$ and $SRAC_2$, where $SRAC_1$ represents the cost function of a small cooperative or buying club which has minimal fixed assets and overhead, distributing food as soon as it is purchased out of a free distribution point such as a member's home. $SRAC_2$ describes the cost function of a larger cooperative which continues to rely primarily on volunteer labor but has acquired fixed assets such as a storefront for distribution, some storage and transportation capacity in order to handle a larger volume, and possibly a paid part-time manager or coordinator to reduce losses. Point A represents the volume of sales handled by a small buying club with only 10 or 15 households participating. If it expands in membership to handle a volume of salesequivalent to B, it can reduce the costs per unit purchased (from C_A to C_B) by taking advantage of discounts on larger lots, as well as better prices from more distant sources of supply. Beyond point B, however, it becomes increasingly difficult to coordinate activities within the cooperative, costs begin to rise because of losses due to inadequate storage, missed work shifts, and pilferage. In order to handle this larger volume, at a volume of sales equivalent to C it becomes more efficient to acquire distribution space, and transportation capacity so the cooperative can expand to point D, where costs decline along $SRAC_2$ reaching a minimum at C_D. Beyond this point, costs again begin to rise because management problems associated with increased volume and membership create operational inefficiency and losses.

Observation indicates that the maximum manageable size for a cooperative relying primarily on volunteer labor is approximately 800-1,000 member households.[2] To move from volunteer labor to hired labor, however, means that fixed costs increase dramatically, shifting average costs from $SRAC_2$ to $SRAC_3$. In order to reduce costs to a level which will allow food to be purchased by members at prices below competitive market prices, the coop must achieve substantial economies of size by increasing its volume of sales to a point at least equivalent to that of a small to medium size supermarket. There is a substantial gap between the volume of sales generated by 1,000 regular cooperative participants and the volume of sales generated by the smallest supermarkets.[3] Consequently, there is no smooth expansion path along which a volunteer staffed cooperative can expand into a store type cooperative operated by hired labor.

The alternative of beginning with a large store operation, however, has proved to be risky because such an operation has difficulty in

FIGURE 1:

Average Cost Curves of Cooperative Firms



forming the nucleus of committed and dedicated membership which is required for success. Many such attempts at "top-down" organizing, especially in connection with urban poverty programs, have been attempted without much success.

II. Perspectives on Cooperative Growth

Can the newly emerging consumer cooperatives evolve different organizational structures to expand and grow to become a viable alternative in the food marketing system? Perspective on their potential for growth, through structural evolution and change, may be obtained by comparison with the evolution and growth of successful forms of cooperatives in agriculture, particularly producer marketing cooperatives. Cooperative action by agricultural producers is generally thought to have been very successful in attaining for producers a more favorable bargaining position in the food system. Although the cases are not strictly identical because farmers are seeking to raise the prices of the foods they sell, while consumers are attempting, through cooperative action, to reduce the prices of the foods they purchase, there are many parallels that can be drawn. Both types of cooperation are in response to unfavorable market conditions - in the case of producer cooperatives, low producer returns, and in the case of consumer cooperatives, high consumer prices. Both types attempt to gain a more favorable bargaining position in the marketplace for their members.

Many of the structural limitations and organizational problems discussed above which confront the newly emerging consumer cooperatives correspond to those confronted in the early phases of producer cooperative marketing associations. By examining the economic, structural and institutional conditions influencing the periods of growth of the agricultural marketing cooperatives, we may project the growth potential for the reemergence of consumer co-ops. We focus specifically on dairy and fruit and vegetable producer marketing cooperatives because the two together constitute the largest number of marketing cooperatives, classified by product type: of the 1,674 marketing cooperatives functioning in 1976, 43% of the total number of cooperatives marketed either fruits and vegetables or dairy products [14].

Historical Development of Producer Marketing Cooperatives

There were three major periods of growth and structural change for the agricultural marketing cooperatives. The first period of initial formation and growth, 1810-1920, was marked by periods of low producer returns that stimulated organization of cooperatives. By 1867, during which time period milk prices were very low, there were more than 400 dairy cooperatives in the U.S. [23, p.2]. In that year too, the first cooperative fruit marketing organization (Fruit Growers Union) was formed. The fruit and vegetable marketing cooperatives which followed were organized to sell cranberries, grapes, apples and citrus, ranging in membership from as few as 180 to as many as 2,000. By 1915 there were 871 fruit and vegetable marketing organizations with a membership of 110,000. [13].

However, many of these early fruit and vegetable cooperatives failed or were reorganized at least once in the period prior to 1920. These early cooperatives were organized primarily on a capital stock basis, with all savings returned to shareholders in proportion to their ownership of stock. As stock became more concentrated in the hands of a few individuals, who were more profit oriented than oriented towards the maintenance of the organization, the support of growers started to decline. Another reason for failure was bitter opposition to the cooperatives from powerful shippers, making it difficult to obtain price advantages in the market [17, p.274].

Dairy cooperatives also experienced difficulty, and for similar reasons; the dairy cooperatives were not very successful in achieving price increases for their members. Because of the power of dealers over the collection and distribution of milk, the cooperatives did not have enough clout to successfully withhold milk for higher prices [5, p.3]. This was the problem experienced by the Milk Producers Association of Boston and New Hampshire, a cooperative with 874 members in 1867. The Association had little success in bargaining until it merged with the Boston Cooperative Milk Producers Company in 1899 [5]. Also to attain sufficient bargaining clout, in 1907, the Dairymen's League was formed by producers supplying the New York Metropolitan market. By 1917, the organization had 13,000 memberships and sponsored a successful milk strike for price increases [21, p. 6,7].

The second phase of cooperative action, 1920-45, was marked by increasing legislative and regulatory activity. The Capper-Volstead Act (1922) legalized formation of marketing cooperatives and was followed by a series of legislation that strengthened and supported growth and development of cooperatives [2, 3]. In 1926, the Cooperative Marketing Act established the Division of Cooperative Marketing within the United States Department of Agriculture (USDA). Later in 1928, the Agricultural Marketing Act established the Federal Farm Board, with $500 million for loans and assistance to develop a strong comprehensive system of cooperative marketing organizations. In 1933, the Farm Credit Act transferred the duties of the Farm Board to the Farm Credit Administration. An additional provision to the Credit Act was the establishment of 13 regionally located Banks for Cooperatives.

The initial effect on dairy cooperatives of this government involvement was a phenomenal amount of growth and development. Many new organizations came into being and some of the existing cooperatives as well were reorganized and strengthened with funds from the Banks for Cooperatives. Many bargaining cooperatives expanded the scale of their operations to include processing and distribution [18]. In 1936, there were 2,338 dairy cooperatives, providing a variety of services and products: 114 of these were bargaining associations with an average membership of 1,176; 239 were operating associations, with an average membership of 426; and there were 1,385 cooperative creameries and 538 cooperative cheese factories [21, p. 24].

One cooperative association that was a product of this period is the Land O'Lakes Creameries, Inc. of Minneapolis. Formed in 1922, as a federation of local cooperative creameries united for the collective merchandizing of butter, this organization grew to include 495 member associations by 1929. In later years, the organization expanded its activities to include manufacture and processing of cheese, eggs, and poultry [12, p. 26 and 27]. By 1936, 48% of the fluid milk, 39% of the butter and 29.4% of the cheese produced was being marketed through dairy cooperatives [21, p. 25].

Fruit and vegetable cooperatives continued to show a high rate of mortality in the early part of the period. Data compiled in 1932 indicated that 52% of the 3,046 associations for which records were available were nonfunctioning and that 68% of those cooperatives had operated only for one to five years [11]. But, the development of the legal framework for cooperatives and government financial support in the 1930's, especially the establishment of the Federal Farm Board and the Farm Credit Act of 1933, did facilitate the continuing development of large scale fruit and vegetable cooperatives [16]. Out of 916 cooperatives marketing fruits and vegetables in 1944/45, at least 20 were very large scale organizations, each with an annual business of half a million dollars a year [4]. Further, the development and large scale growth of cooperative marketing associations in the Florida and California citrus industries were promulgated by a series of Marketing Agreements in each state which provided a framework within which grower and shipper interests could be coordinated.

The third, postwar, period in cooperative marketing was one of federation, consolidation and growth of large scale organizations. While the absolute number of cooperatives declined throughout the 1950's and early 1960's (the number of dairy cooperatives declined by an average of 7% per year, and the number of fruit and vegetable cooperatives decreased from 825 to 654 over that period [20, p. 45]), the remaining cooperatives' scales of operation expanded to handle greatly increased volumes. Values of sales by cooperatives more than doubled [4, p. 133].

The major stimulants to these changes were the rise of supermarkets, wholesaler concentration and changing technologies in handling and processing [6]. The response of dairy cooperatives to this changing market situation was the formation of federations, within which each cooperative maintained its status as a separate corporation, but whose activities were coordinated to more effectively bargain with handlers for higher milk prices [19]. Although two large federations had formed prior to 1960 - the Dairy Products Marketing Association and the National Milk Producers' Federation with 100 member cooperatives - during the 1960's, eight additional federations were formed, each of which had anywhere from five to twenty cooperatives and 500 to 53,000 producers [19].

The trend toward regional consolidation of fruit and vegetable cooperatives accelerated considerably in this postwar period. In 1951/52, the regional marketing associations handled 35% of total cooperative fruit and vegetable volume. By 1963/64, that figure had risen to 43.9% and by 1971/72, to 66.6% [24]. In addition, fruit and vegetable marketing cooperatives acquired large scale processing, freezing and canning units, developed bargaining cooperatives on a large scale (by 1965 there were about 40 of these cooperatives), and set up associations (e.g. the American Agricultural Marketing Association) to assist growers in their bargaining activities [4, p. 152].

III. Possibilities and Potentials for Consumer Cooperative Growth

There are a number of parallels that can be drawn between producer cooperative growth and the reemergence of the consumer cooperative movement. The external economic environment, in the form of food price inflation, is presently providing the stimulus to the consumer cooperative movement in the same way as depressed food prices stimulated formation of the marketing cooperatives in the period prior to 1920. Both types of cooperatives attempt to function independently of the noncooperative sector in terms of pricing behavior. In the case of marketing cooperatives, producers attempt to obtain higher-than market prices. In the case of consumer cooperatives, the cooperative sells below market price whenever possible.

To countervail the increasing power of the supermarkets and large wholesalers in the post-war era, producer marketing cooperatives found it necessary to federate over a fairly large geographical range. As large retail food chains became large purchasers of the cooperatives' products, often cooperatives in different regions found themselves in price competition for the business of the same distributor. Growth and consolidation among milk dealers and distributors changed the type of wholesale customer with whom the dairy marketing cooperatives did business, calling for countervailing cooperative bargaining strength through federation. Interaction among cooperatives in federation activities led to the realization that yet more fully coordinated cooperative activity would increase bargaining power and operational efficiency and control [19] and this led to the merging of interregional cooperatives into multimarket associations.

Vertical integration was another solution developed by fruit and vegetable marketing cooperatives to the increasing size of supermarkets and of other wholesaler purchasers. The terminal market, for example has been largely reduced in importance as a result of direct contracting of the cooperatives with major purchasers.

Similarly, if the newly emerging consumer cooperatives are to develop into a real alternative to the present food retail system, consumer cooperatives must grow in size as well as in numbers. The growth of supermarkets and increasing concentration in the retail food industry is acting as a stimulus to alternatives like consumer cooperatives [8], but if consumer cooperatives are to compete effectively, they need to achieve equivalent bargaining strength in competing for supplies and markets.

The newly emerged consumer cooperatives have already sought a variety of organizational forms and methods of operation in efforts to expand. One variation is between the store cooperative and the cooperative that operates as a "preorder" or buying club, which may not even have a fixed distribution point. Preorders are designed to be a smaller unit than stores, falling somewhere between the household and the supermarket in scale. But through the device of organizing into "blocks" or "branches", preorders in some cases have grown quite large [9]. These block preorders handle the duties of purchasing and distribution on a rotation basis, with each block taking its turn as the "masterblock" for some specified period. The branch cooperative has a volunteer central committee that purchases and distributes food for the entire cooperative, and does not rotate.

As an alternative to expanding as a retail operation, consumer cooperatives have also sought integration through the supply system. Vertical integration is an attempt to shift the cost curve downward by eliminating the marketing margins between the farmer and the retailer. As a strategy it has sound economic rationale, because gross wholesale-retail marketing margins are only about 20% of sales [10], most of which cannot be eliminated. The farmer's share of the food dollar, however, is a relatively small component of food cost and elimination of the farm-wholesale margin substantially decreases costs to the cooperative.

Most of the new cooperatives have a strong interest, not only for economic but ideological reasons, in eliminating the middleman's share. Direct marketing of produce, grains and sometimes meats, or at a minimum, purchasing from terminal markets are fundamentals of most cooperative operations. To carry a full line of products, however, including those processed goods for which the farm wholesale-retail margin is highest, requires a degree of vertical integration that most new cooperatives have not achieved, although some have begun to explore linkages with older consumer cooperatives which have developed that capacity.

Another device which has been employed with some success by both preorders and store cooperatives to overcome diseconomies of small size, is federation with similar organizations to fulfill shared needs. In its simplest form, a group of cooperatives can informally meet for political and educational purposes. At greater levels of complexity, cooperatives can form a federation which will handle ordering, buying, shipping and warehousing, and even processing (particularly milling and baking). In some cases, large cooperatives and/or federations have taken up farming in order to internalize the primary source of supply. But these are rare and for the most part, federation has not been very successful because of the difficulty of coordinating many small, volunteer staffed organizations.

Thus although expansion has been attempted both through federation and vertical integration, there may be more basic structural changes within cooperatives that are required as pre-conditions for growth and consolidation. Based on the early experiences of the producer marketing cooperatives which were formed on a non-stock basis (like the California Fruit Exchange, which had to be reorganized from a nonstock to a capital stock basis in 1907 because of heavy indebtedness), the newly emerging cooperatives may need to turn to the capital stock form of ownership to solve the capital formation problems encountered in the growth process. The instincts of the newly emerging consumer cooperatives in attempting to maintain broad membership participation by relying on a non-stock form of organization, are understandable; the early experience of the fruit and vegetable marketing cooperatives organized before 1920, that relied on capital stock, shows that they lost membership support and failed when ownership of stock became concentrated in the hands of a few individuals. But the solution to this problem, as developed by the producer marketing cooperatives, was to retain the capital stock form of organization and to limit the number of shares held by any individual.

The role of government intervention through legislative acts (like those passed during the 1930's), and through the establishment of a cooperatives' credit system cannot be ignored as an important factor influencing the growth and expansion of the producer marketing cooperatives. The government-sponsored Banks for Cooperatives directly influenced the evolution of the financial structure, as well as the management of these marketing cooperatives.

Influence of the Banks for Cooperatives in the operation and management of cooperatives has increased over time, as borrowed capital from this source, as a percentage of cooperatives' assets has increased. In 1976, 73% of the capital borrowed by marketing cooperatives was from the

Banks for Cooperatives.

Over time, marketing cooperatives have relied increasingly on borrowed capital from all sources and less on equity capital. For producer cooperatives in general, equity capital decreased from 54% of total assets in 1954 to 41.7% in 1976, whereas borrowed capital increased over that time period from 24.5% to 33.1% of total assets [14]. The increase in borrowed capital has undoubtedly given banks a greater influence on cooperative management. For example, in the case of the Florida Citrus Mutual in 1949, growers, shippers and canners were faced with an ultimatum from influential banks to produce a workable coordinated marketing plan if adequate financial backing and further credit were to be granted [6, p. 50].

With the formation of the National Consumer Cooperative Bank (NCCB), which is patterned after the Banks for Cooperatives and which has over $100 million to lend in its initial three years, increasing reliance of consumer cooperatives on borrowed capital from this source can be expected. As consumer cooperatives come to rely on borrowed capital, increased involvement of lending institutions in the management of the cooperatives can be expected as well. Already the NCCB has stipulated operational changes as a condition for financing of one long established consumer cooperative in New York State which has experienced financial difficulties. As borrowed capital increases as a percentage of assets in the more recently formed consumer cooperatives, the use of volunteer labor and loosely structured management systems is likely to decrease, as the lending institutions come to demand more efficiency and accountability. The medium to long-term impacts of the NCCB on the structure of consumer cooperatives and on consumer cooperative growth is, of course, yet to be seen, but given the amount of money this Bank has to lend, are likely to be substantial.

IV. Conclusion

The major conclusions to be drawn from this analysis are that the recently formed consumer cooperatives must grow if they are to become economically viable in the present food marketing system and that, to do so, certain structural changes must occur. The needed structural changes can be identified by comparing the evolution of producer marketing cooperatives with the dominant characteristics of consumer cooperatives today. They consist of adopting a capital stock form of organization, decreasing the use of volunteer labor and increasing the efficiency of management, increasing the reliance on borrowed capital, which has been made available as a catalyst to growth by government sponsored financial institutions, and federation and consolidation in the recently formed consumer cooperatives.

REFERENCES

1. Anderson, R.K., P.K. Porter and S.C. Maurice, "The Economics of Consumer Managed Firms," Southern Economic Journal, 46, July, 1979, pp. 119-130.

2. Benedict, M.R., Can we Solve the Farm Problem? Baltimore: The Twentieth Century Fund, 1955.

3. Benedict, M.R., and O.C. Stine, The Agricultural Commodity Programs, Baltimore: The Twentieth Century Fund, 1956.

4. Blum, M.A. and F.E. Hulse, "Fruit, Vegetable and Nut Cooperatives," in Farmer Cooperatives in the United States, Farmer Cooperative Service, U.S. Department of Agriculture, Bulletin No. 1, 1965, pp. 126-155.

5. Bronson, "General History of Milk Producer Cooperatives in New England," Department of Agricultural Economics, Cornell University, Mimeograph, 1966.

6. Clarke, J.G., Development of an Industrywide Grower Marketing Association in the Florida Citrus Industry, M.S. Thesis, Department of Agricultural Economics, Cornell University, 1964.

7. Co-op Handbook Collective, The Food Co-op Handbook: How to Bypass Supermarkets to Control Quality and Price of your Foods, Boston: Houghton-Mifflin Company, 1975.

8. Cotterill, R., "Declining Competition in Food Retailing--An Opportunity for Consumer Food Cooperatives?" Journal of Consumer Affairs, Winter, 1978, pp. 250-265.

9. Curhan, R.C., and E.P. Wertheim, "Consumer Food Buying Cooperatives Revisited: A Comparison from 1971 to 1974," Journal of Retailing, 51, Winter 1975-76, pp. 22-31.

10. Earle, W., "Operating Results of Food Chains," New York State College of Agriculture and Life Sciences, Cornell University, various years.

11. Elsworth, R.H., "Statistics of Farmers Cooperative Business Organizations, 1920-1935", Farm Credit Administration, Cooperatives Division, U.S. Department of Agriculture, Bulletin No. 6, 1936.

12. Fetrow, W.W., "Cooperative Marketing of Agricultural Products", Farm Credit Administration, Cooperatives Division, U.S. Department of Agriculture, Bulletin No. 3, 1936.

13. Fetrow, W.E. and R.H. Elsworth, "Agricultural Cooperation in the United States," Farm Credit Administration, U.S. Department of Agriculture, April, 1947.

14. Griffin, N., et. al., "The Changing Financial Structure of Farmer Cooperatives," Economics, Statistics and Cooperatives Service, U.S. Department of Agriculture, Farmer Cooperative Research Report, No. 17, March 1980.

15. Helmberger, P.D. and S. Hoos, "Cooperative Enterprise and Organization Theory," Journal of Farm Economics, 44, May 1962, pp. 275-291.

16. Knapp, J.G., The Advance of American Cooperative Enterprise, 1920-1945, Danville, Illinois: The Interstate Printers and Publishers, Inc., 1973.

17. Knapp, J.G., The Rise of American Cooperative Enterprise, 1620-1920, Danville, Illinois: The Interstate Printers and Publishers, Inc., 1969.

18. Knapp, Joseph, "Capper Volstead Impact on Cooperative Structure," Farmers Cooperative Service, U.S. Department of Agriculture, Circular No. 97.

19. Knutson, R., "Cooperative Bargaining Developments in the Dairy Industry, 1960-70", Farmers Cooperative Service, U.S. Department of Agriculture, Report No. 19, 1971.

20. National Commission on Food Marketing, "Organization and Competition in the Dairy Industry," Technical Study No. 3, 1966.

21. Spencer, L. and C.J. Blandford, An Economic History of Milk Marketing and Pricing, 1800-1933, Volume I, Columbus, Ohio: Grid Publishing Co. Inc., 1977.

22. Trelogan, H., "Cooperative Marketing of Dairy Products," Farm Credit Administration, U.S. Department of Agriculture, Circular No. 16, 1939.

23. U.S. Department of Agriculture, Farm Credit Administration, "The Story of Farmers Cooperatives," Circular No. E-23.

24. U.S. Department of Agriculture, Farmers Cooperative Service, "Statistics on Farmer Cooperatives," Farmers Cooperative Service Research Report, various issues.

25. Ward, B., "The Firm in Illyria: Market Syndicalism," American Economic Review, 48, 1958, pp. 566-89.

FOOTNOTES

1 Examples of the older type of consumer cooperatives include the Berkeley, California, Consumers' Cooperative Society, and the Washington, D.C., Green Belt Consumers' Cooperative. Centers of activity for the newer cooperatives are Minneapolis, Boston, Chicago, Austin, and Northern California.

2 For example, two well established volunteer staffed cooperatives in the Northeast (the Ithaca, New York, Real Food Cooperative and the Park Slope Cooperative in New York City), after a decade of operation, have reached about this size and it is unlikely that they can grow beyond this point; coordinating work activities in a cooperative manner becomes unmanageable.

3 For an 8,000-10,000 square foot supermarket, the smallest size store that would carry a full line of foods including meats, a customer count of at least 6,000 per week is needed for survival.